

Hitachi develops "Frontline Coordinator – Naivy" as a next-generation AI agent that helps alleviate the psychological burden on frontline workers and enhance work efficiency

The new AI solution reduces "stumbles" (minor setbacks and doubts) by inexperienced workers at facility management worksites in Japan and overseas, contributing to the transfer of skills and improved wellbeing

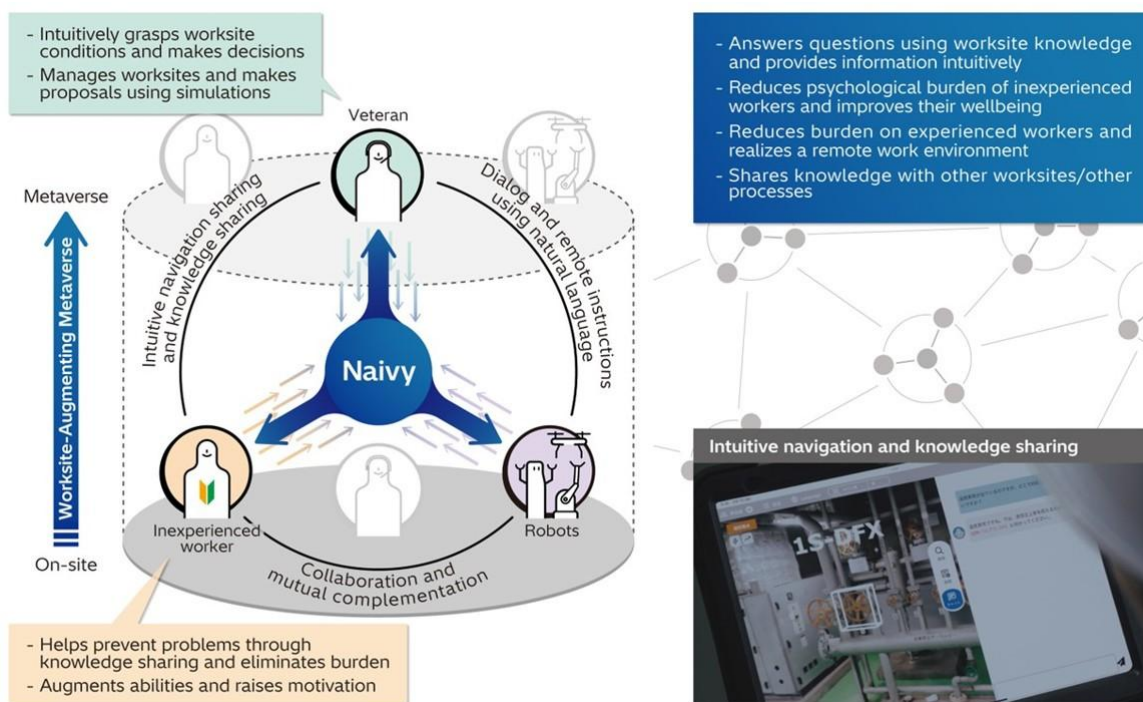


Figure 1. Utilizing next-generation AI agent "Frontline Coordinator – Naivy" (ex.)

Tokyo, July 3, 2025 Hitachi, Ltd. (TSE:6501, "Hitachi") and Hitachi Plant Services Co., Ltd. have developed "Frontline Coordinator – Naivy"^{*1} (hereinafter, "Naivy"), a next-generation AI agent aimed at reducing the psychological burden on inexperienced workers who perform frontline operations and supporting work efficiency. Naivy effectively integrates and coordinates information collected and generated in a metaverse and real-time events and conditions at worksites. The AI agent then provides necessary information to people and robots in a timely and easily understandable way. Used in combination with the Worksite-Augmenting Metaverse^{*2} or other metaverse platforms, Naivy intuitively visualizes specific operation procedures according to various work situations, even when inexperienced workers have to deal with unfamiliar operations, lessening the risk of workers having trouble identifying the appropriate equipment or figuring out how to deal with the situation. In a verification trial at a Renesas Electronics Corporation (hereinafter, "Renesas") plant, the performance of inexperienced workers in facility management tasks improved by around 30 percent. Naivy was also observed to be effective in alleviating the workers' psychological burden.^{*3}

Going forward, Hitachi and Hitachi Plant Services plan to offer Naivy to customers that engage in managing domestic and overseas facilities and building manufacturing line, support them in enhancing work efficiency and transferring skills among employees, and, on a broader level, help them improve the wellbeing of frontline workers. As a further move, Hitachi Solutions, Ltd. plans to release products during 2025 that include knowledge-management functions and relevant applications.

*1: Derived from the terms "navigator" and "AI," this name symbolizes the role of a coordinator for integrated collaboration among people, AI, and robots. The trademark application is pending.

*2: [See the related news release \(December 18, 2023\): "Hitachi develops Worksite-Augmenting Metaverse, a fusion of worksite data-collection technology and generative AI."](#)

*3: This finding is based on a questionnaire conducted by Hitachi.

Background and issues

Facility management worksites are experiencing a growing shortage of highly skilled workers, which is a common problem across society. Since experienced workers are often unable to devote sufficient time to on-the-job training (OJT), there are an increasing number of cases where this lack of OJT results in a psychological burden on inexperienced workers assigned to unfamiliar on-site tasks. In this context, there is an urgent need to create a framework to more intuitively share the skills of experienced workers with newer workers and thereby make operations more efficient worksite-wide.

Features of next-generation AI agent "Frontline Coordinator – Naivy"

In response, Hitachi and Hitachi Plant Services have developed "Frontline Coordinator – Naivy" as a next-generation AI agent aimed at reducing the psychological burden on inexperienced workers and improving the efficiency of frontline operations. Naivy effectively integrates and coordinates information collected and generated in a metaverse and events and conditions occurring in real time at the worksite in order to provide necessary information in a readily understandable way. The AI agent ensures systematic management of the diverse knowledge that experienced workers have allowed Hitachi to accumulate on a global scale. Naivy also provides intuitive support geared to the circumstances at each worksite, employing One Hitachi solutions that take advantage of the onsite engineering capabilities of Hitachi Plant Services. In the environment Naivy helps create, even inexperienced workers can thus feel more comfortable engaging in operations. The main features of Naivy are as follows.

1. Drawing on worksite knowledge to answer questions and providing information intuitively

In combination with the Worksite-Augmenting Metaverse, Naivy responds to issues facing inexperienced workers at the worksite by visually showing location information and specific work procedures in the metaverse in real time. When a worker troubleshoots air conditioning control, for example, Naivy identifies the applicable unit and corresponding location with the equipment name and room name, selects the relevant workflow, and shows the operation procedure. In this way, Naivy makes inexperienced workers less vulnerable to difficulties determining what equipment to operate and how to perform operations. This also creates an environment where these workers can carry out their duties efficiently and confidently, as a veteran would.

In actual use, Naivy has demonstrated the ability to support quick response to trouble. Figure 2 shows an example of a temperature rise in a facility. The AI agent provides a countermeasure

workflow diagram, displays the accurate location of and route to the site experiencing the issue, and proposes a response method. (In this case, Naivy identifies the applicable valve and advises the user to turn it 30 degrees.) When Hitachi and Hitachi Plant Services ran a verification trial at a Renesas plant, they confirmed that Naivy can improve the ability of inexperienced workers to perform operations by around 30 percent, including shorter trouble response times.

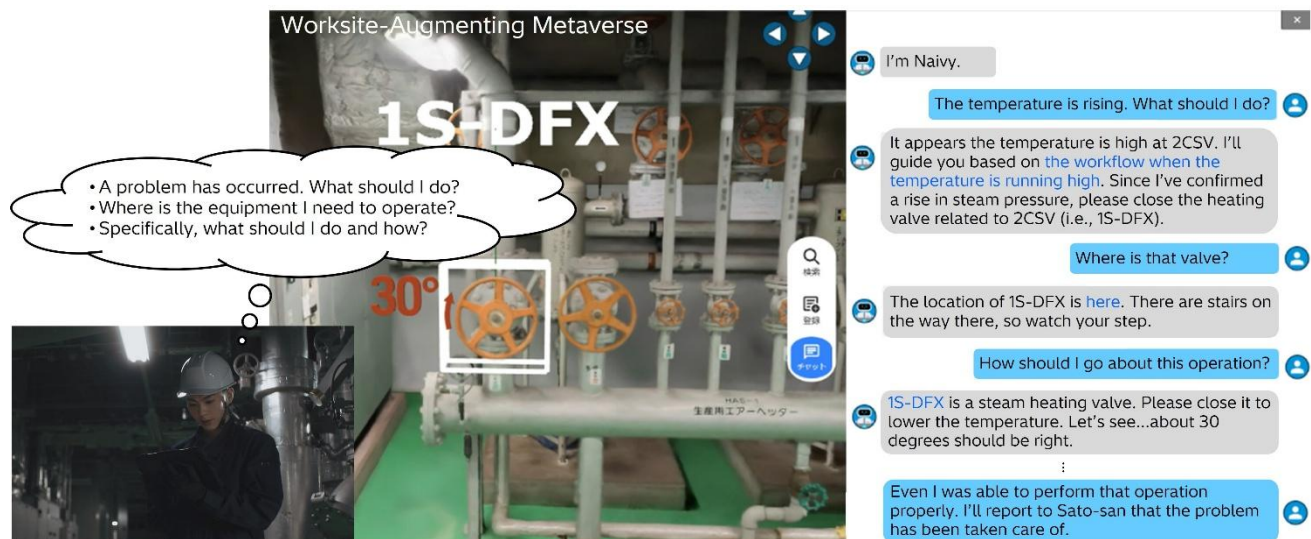


Figure 2. A situation where inexperienced workers tend to "stumble" (L) and worksite guidance offered by Naivy x Worksite-Augmenting Metaverse (R) (illustration)

2. Reducing psychological burden on inexperienced workers and improving their wellbeing

Naivy provides an environment where inexperienced workers confronting a task that they are only somewhat familiar with can obtain the necessary knowledge and determine the proper procedures without relying on their more experienced peers. By doing so, the platform eases the psychological burden on inexperienced workers and helps them carry out their work with confidence. Naivy's support also decreases the burden on experienced workers when they instruct colleagues who need more training, which ultimately contributes to better worksite operational efficiency overall. Furthermore, by speeding up OJT and decision-making through remote communication between veterans off site and inexperienced workers on site, Naivy promotes remote work for worksite tasks, which has traditionally been difficult, and helps create a more fulfilling work environment.

Looking ahead

Working together with customers that engage in domestic and overseas facility management and manufacturing line building, Hitachi and Hitachi Plant Services will apply Naivy toward helping customers transfer skills and utilize domain knowledge, building the AI agent into one of the technologies for bringing Lumada 3.0 to fruition. Hitachi Solutions plans to release products during 2025 that include knowledge-management functions and relevant applications.

In addition, Hitachi is developing various AI technologies that assist clients in improving the safety and work efficiency of frontline workers at many different worksites engaged in design, construction, manufacturing, and maintenance; these technologies will be incorporated in Naivy over time. Through these groupwide initiatives, the Hitachi Group aims to realize work environments where frontline workers can work in comfort and better fulfill their potential.

Introduction at Hitachi Social Innovation Forum 2025 JAPAN, OSAKA

Naivy will be showcased at "Hitachi Social Innovation Forum 2025 JAPAN, OSAKA" held on July 17th (Thu).

Learn more about the solution at the exhibition "EX01-05: Frontline Coordinator - Naivy."

For more information on "Hitachi Social Innovation Forum 2025 JAPAN, OSAKA", please visit the official website at: <https://www.service.event.hitachi/en/regist/>

About Hitachi, Ltd.

Through its Social Innovation Business (SIB) that brings together IT, OT(Operational Technology) and products, Hitachi contributes to a harmonized society where the environment, wellbeing, and economic growth are in balance. Hitachi operates globally in four sectors – Digital Systems & Services, Energy, Mobility, and Connective Industries – and the Strategic SIB Business Unit for new growth businesses. With Lumada at its core, Hitachi generates value from integrating data, technology and domain knowledge to solve customer and social challenges. Revenues for FY2024 (ended March 31, 2025) totaled 9,783.3 billion yen, with 618 consolidated subsidiaries and approximately 280,000 employees worldwide. Visit us at www.hitachi.com.

About Hitachi Plant Services Co., Ltd.

Hitachi Plant Services is a comprehensive engineering company that aims to meet various customer needs in a wide range of fields such as air, water, and energy, striving to realize a comfortable society. From engineering various plants and factory facilities to providing maintenance services and renewals, we offer solutions that contribute to the growth of our customers' businesses and the resolution of social issues. Additionally, through digital innovations such as operational efficiency solutions powered by Lumada, we contribute to both business growth and solving societal challenges.

Media Contact

Hitachi, Ltd.

Research & Development Group

<https://www8.hitachi.co.jp/inquiry/hitachi-ltd/hqrd/news/en/form.jsp>

Hitachi Plant Services Co., Ltd.

Corporate Planning Department

Corporate Planning & Strategy Division

Corporate Communication Group

hps.pr.zv@hitachi.com

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